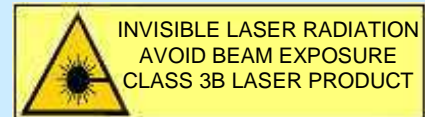
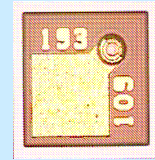


Single mode & polarization VCSEL 850nm

- ◆ Single-mode & stable linear polarization
- ◆ Ultra low current requirement and power consumption
- ◆ Ideally for wireless laser mouse and trackball application in mobile phone



Preliminary

ELECTRO-OPTICAL CHARACTERISTICS

T=25°C unless otherwise stated

PARAMETER	SYMBOL	UNITS	MIN	TYP	MAX	TEST CONDITIONS
Emission wavelength	λ_R	nm	840		860	
Threshold current	I_{TH}	mA		0.6	1.5	
Laser current	I_{op}	mA		1.4	2.0	Output power = 0.45mW
Laser voltage	U_{OP}	V			2.6	
Slope efficiency	η_S	W/A		0.6		
Differential series resistance	R_S	Ω		200		
Beam divergence	θ	°	15		22	1/e ² ; Output power = 0.45mW
Side mode suppression ratio	SMSR	dB	6	20		Output power = 0.45mW
ESD damage threshold		V	50	70		human body model
Dynamic polarization flips					0	

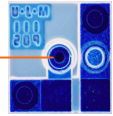
ABSOLUTE MAXIMUM RATINGS

Storage temperature	-40 .. 70°C
Operating temperature	5 .. 45°C
Output power	3 mW
Continuous forward laser current	3.3 mA
Laser reverse voltage	8V
Soldering temperature	300°C

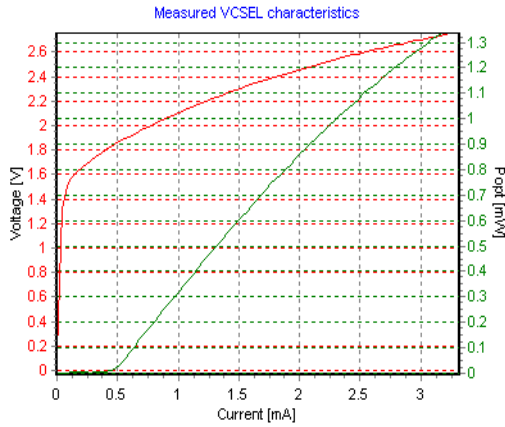
NOTICE: Stresses greater than those listed under „Absolute Maximum Ratings“ may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other condition beyond those indicated for extended periods of time may effect device reliability.



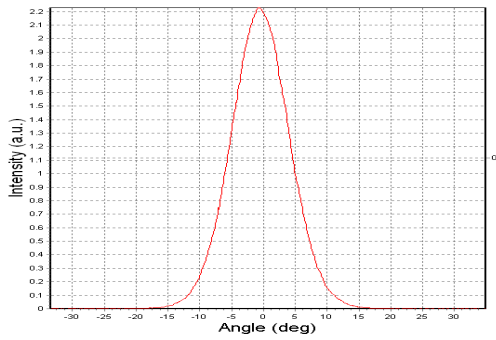
ATTENTION: Electrostatic Sensitive Devices
Observe Precautions for Handling



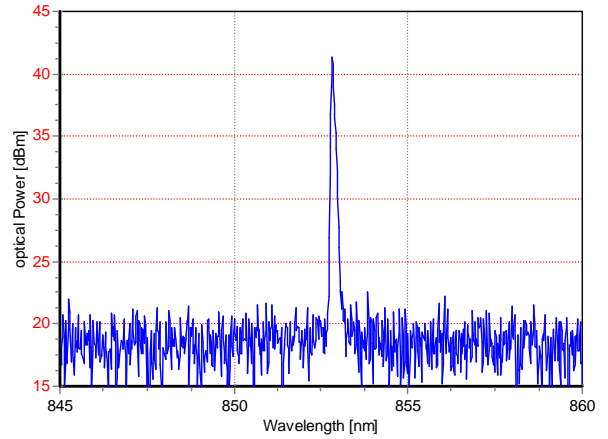
Electro-optical characteristics



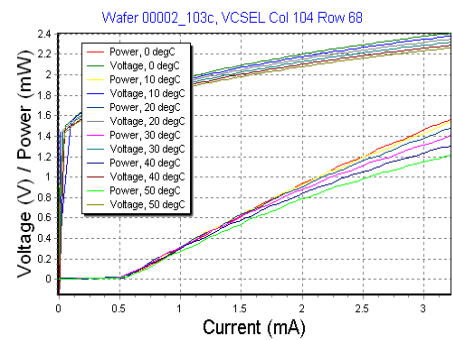
Farfield



Spectral Characteristics

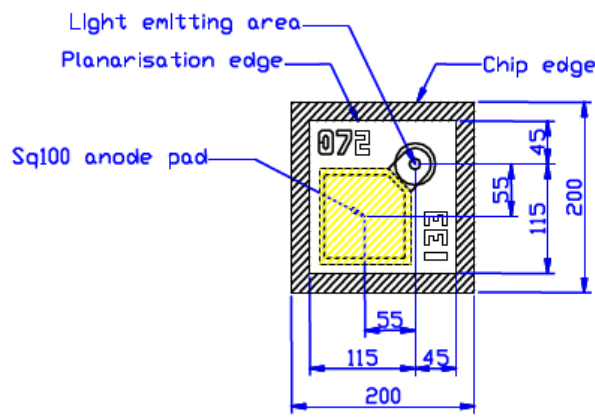


Properties over temperature



ULM850-L2-PL-S0101U

(Single mode with polarization locking, backside cathode contact) Size 200x200x150



unit: μm

OPTION: TO headers & caps (flat, tilted, ball) or other packages on request